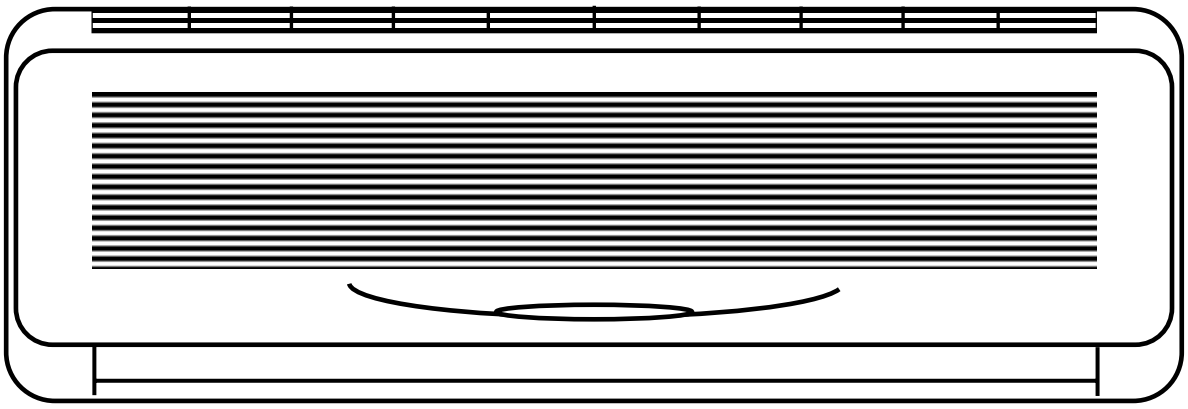
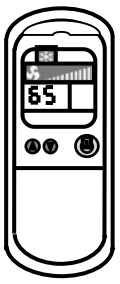
INSTALLATION MANUAL

WALL MOUNTED UNIT





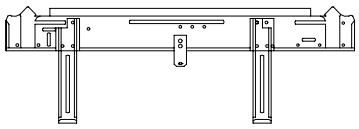
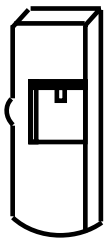
WARNING
1 - For the room air conditioner to operate satisfactory, install it as outlined in this installation manual.
2 -Connect the indoor unit and outdoor unit with the room air conditioner piping and cords available as standard parts. This installation manual describes the correct connections using the installation set available from our standard parts.
3 - Installation work must be performed in accordance with national wiring standards by certified persons only.
4 - Never cut the power cord, lengthen or shorten the cord, or change the plug.
5 - Also, do not use an extension cord.
6 - Plug in the unit firmly. If the receptacle is loose, repair it before using the room air conditioner.
7 - Do not turn on the power until all installation work is completed.

- Be careful not scratch the unit when handling it.
- After installation, explain, **"CORRECT OPERATION"** to the customer, using the operation manual.
- Let the customer keep this installation manual to use when the room air conditioner is served or moved.
- Before supplying the power, check the voltage measured by voltmeter is within ±10V.

Standard Accessories

The following installation accessories are supplied.
Use them as required.

(TABLE 1)

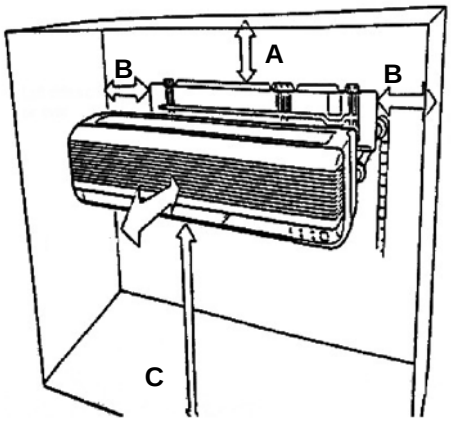
Qty	1	1	1	2
Shape	Mounting Plate. 	Remote Control.	Remote Control Holder. 	Battery.
Use	For indoor unit installation.	For air conditioner operation	Use as remote control unit holder.	For remote control unit.

Selection the mounting position

Install at place that can withstand the weight of the indoor and outdoor units and install positively so that the units will not topple or fall
Don't install where there is the danger of combustible gas leakage.
Don't install near heat sources or direct sun light.
Be sure that the indoor unit installs at height not less than 230 cm(90.6in), to sure that children less than 10 years old not approach the unit.

Decide the mounting position with the customer as follows:

Fig.1

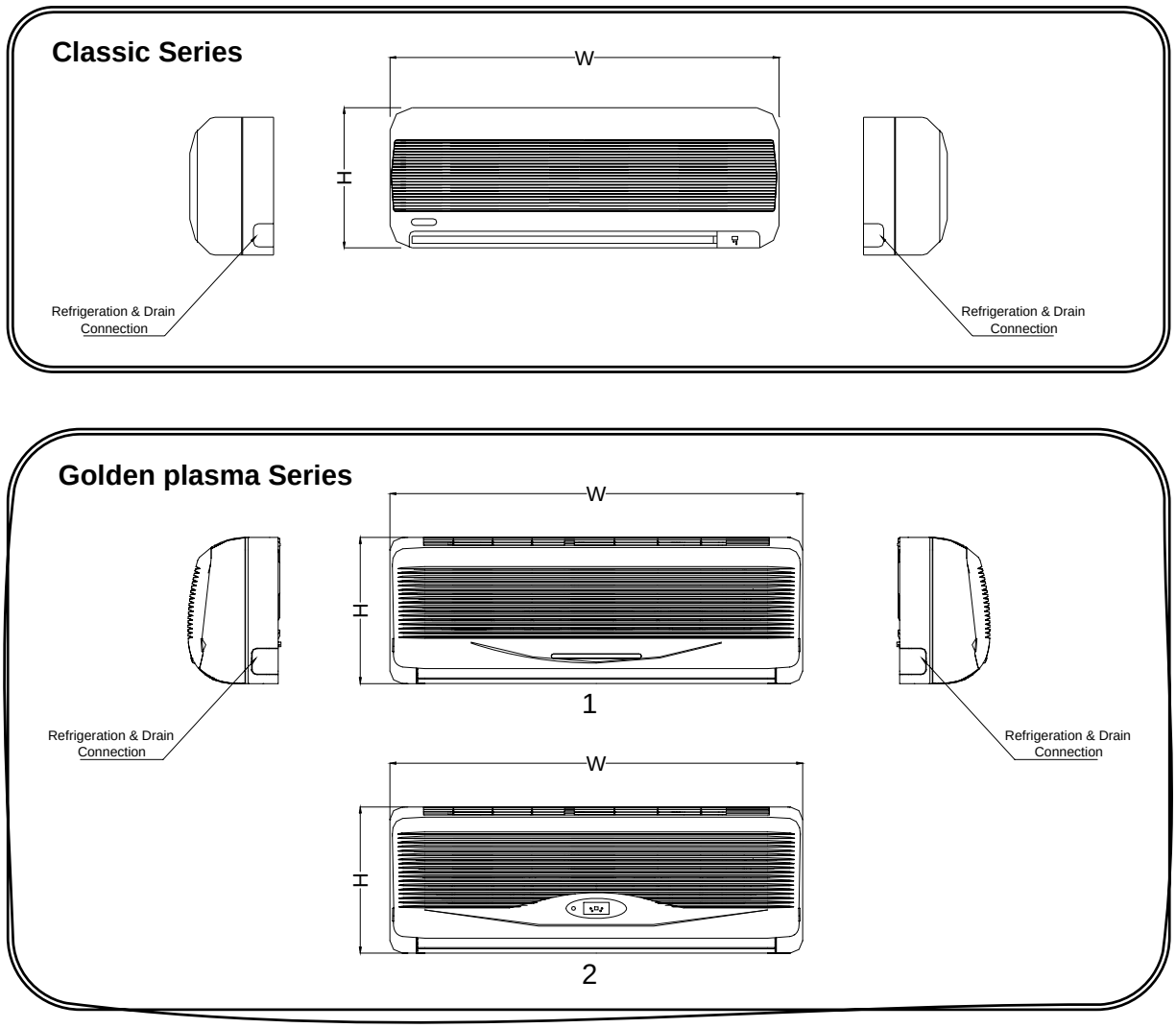


1. Install the indoor unit level on strong wall which not subject to vibration.
2. The inlet and outlet ports should not be obstructed: the air to be able to blow all over the room.
3. Install the unit near an electric source or special branch circuit according to your national electrical code.
4. Avoid any raise in condensate drain piping.
5. Avoid position where condensate cannot be easily piped to an appropriate drain.
6. Avoid any unnecessary turns and bends in the interconnection refrigerant pipes.

(TABLE 2)

A	6cm (2.4 in) or more
B	Left or Right Side 15 cm (5.9 in) or more
C	230 cm (90.6 in) or higher

Fig.2



Indoors Dimensions:

(TABLE 3)

Classic Series	Indoor 07 : 17	Indoor 15 : 24	Indoor 30 : 36
W (mm-inch)	889(35)	1100(43.3)	1200(47.2)
H (mm-inch)	295(11.6)	335(13.1)	357(14.1)

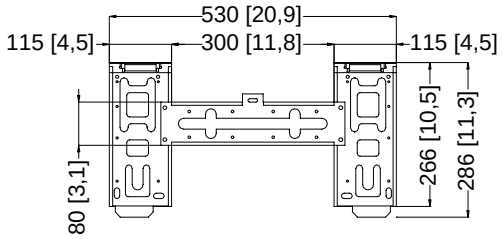
(TABLE 4)

Golden Plasma Design“1 or 2”	Indoor 007 : 015	Indoor 018 : 024
W (mm-inch)	818(32.2)	1090(42.91)
H (mm-inch)	292(11.5)	314(12.36)

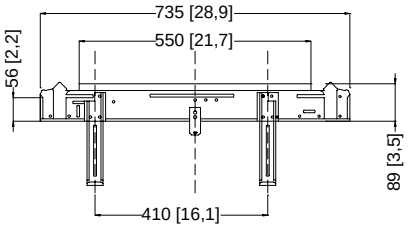
Mounting plate (Dim in mm [inch])

Fig.3

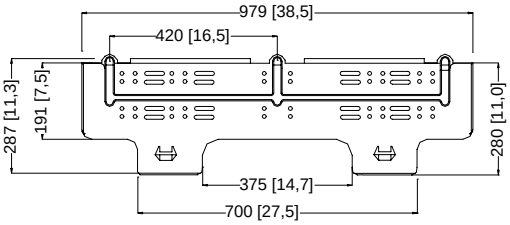
Classic Indoor 07 : 17



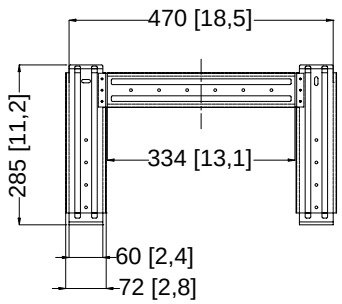
Classic Indoor 15 : 24



Classic Indoor 30 : 36



Golden Plasma series “B”
Indoor 007 : 015



Golden Plasma series”B”
Indoor 018 : 024

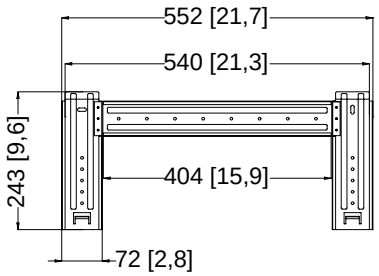
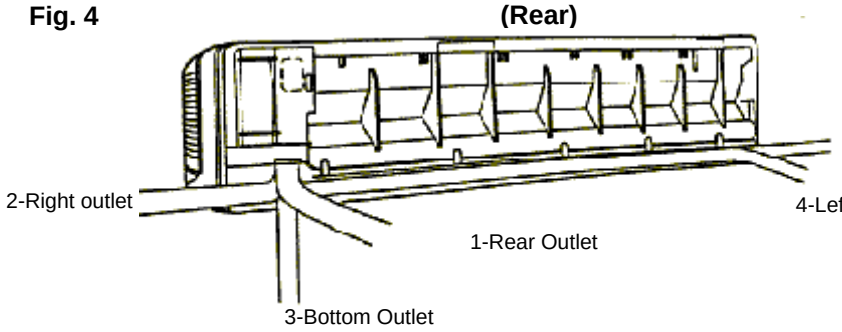


Fig. 4 **(Rear)**



Starting installation:

- Mounting the installation plate (wall hook bracket) according figs. (1, 2, 3) on the wall horizontally.
- Drill a hole in the wall on either the left or right side of the installation plate for refrigerant pipes, drain and Electrical cables; the hole should have a slight inclination to the outside direction.
- Let the hole be 70 -80 mm(2.8-3.1in) diameters and you must use PVC sleeve. Extend the sleeve by length10 – 15 mm (0.4-0.6in) from the outside direction, See Fig. 6.
- Fasten the wall hook to the wall with 6 or more screws through the holes near the outer edge.

Fig. 5

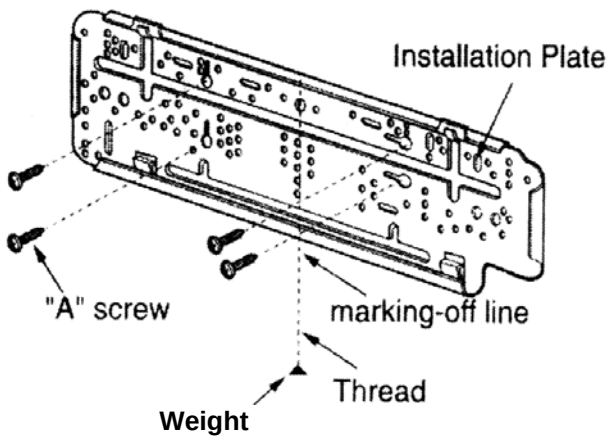
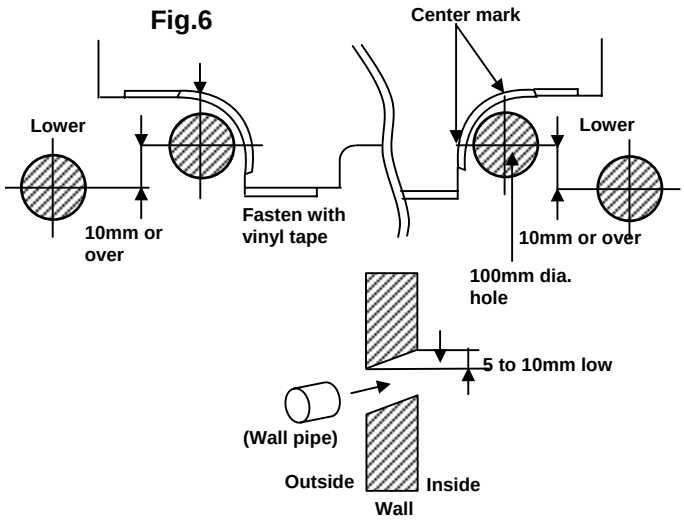


Fig.6



CAUTION

IF the wall hook bracket not stalled horizontally and perpendicularly & if the hook bracket is titled, drain water will drip to the floor.

Fig. 7

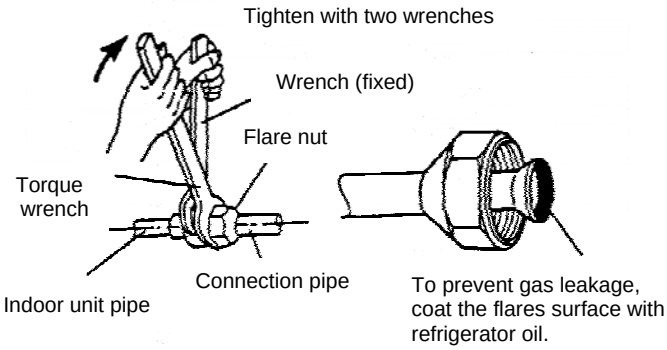


TABLE (5)

Flare nut tightening torque:

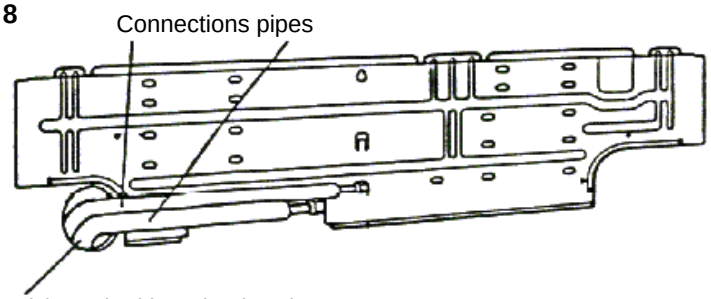
Flare nut	Tightening torque
6.35 mm. Dia.(1/4")	(14.7 to 19.6)N.m (150 to 200)Kgf.cm (10.84 to 14.46) lb-ft
12.7 mm. Dia.(1/2")	(49.00 to 55.86)N.m (500 to 570)Kgf.cm (36.13 to 41.19) lb-ft
9.52 mm. Dia.(3/8")	(34.3 to 39.2)N.m (350 to 400)Kgf.cm (25.29 to 28.93) lb-ft
15.88 mm. Dia.(5/8")	(73.6 to 75.80)N.m (750 to 800)Kgf.cm (54.28 to 57.89) lb-ft
19.05 mm. Dia.(3/4")	(98.00 to 130.00)N.m (1000.00 to 1325.60)Kgf.cm (72.28 to 95.88) lb-ft

CAUTION

Do not remove the cap from the connection pipe before connecting.

- You must use two wrenches one of them torque according the table (2) and (Fig. 7).
- Put the indoor unit over the hook wall plate by engaging the two hooks of the indoor unit their positions in the installation plate.
- Check that the hooks are securely seated in their position by trying to move the unit.
- Check that the unit is fully rested on the wall as shown.

Fig. 8



Bend (R100) with a pipe bender

When extending the drain hose at the indoor unit, install the accessory drain insulation.

Fig.9

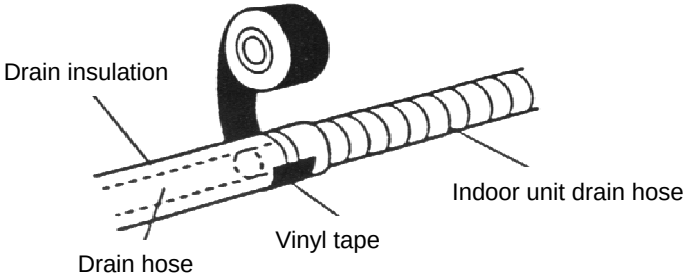
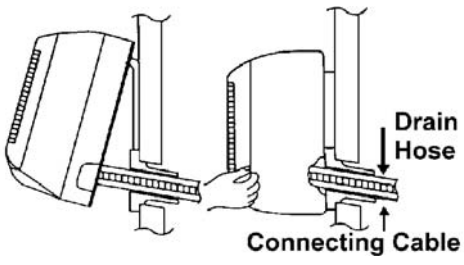
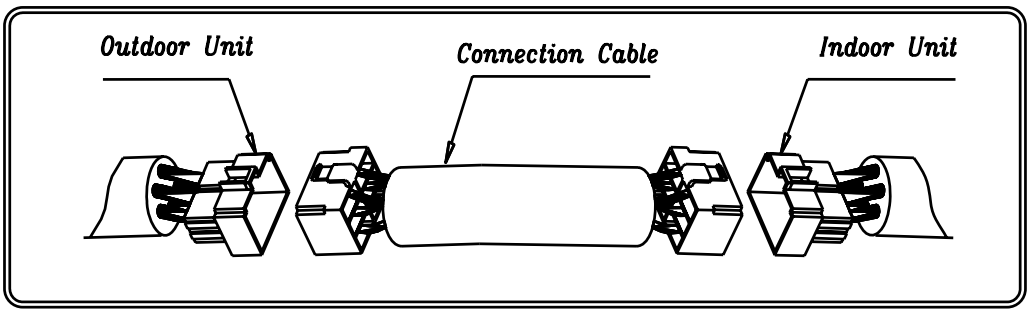


Fig.10

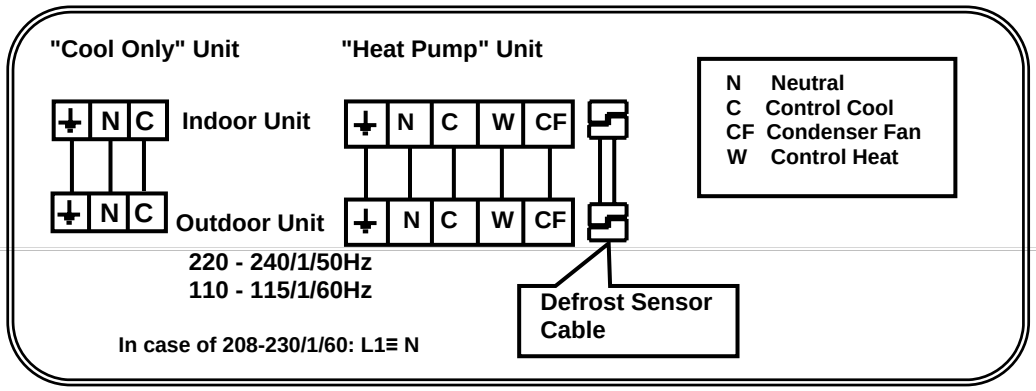


Place the indoor unit drain hose behind the piping.

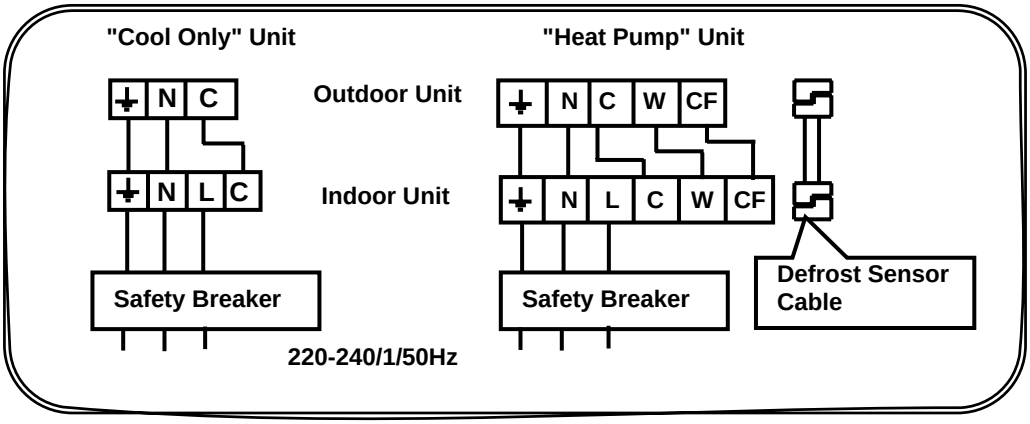
Electric Wiring Diagram:



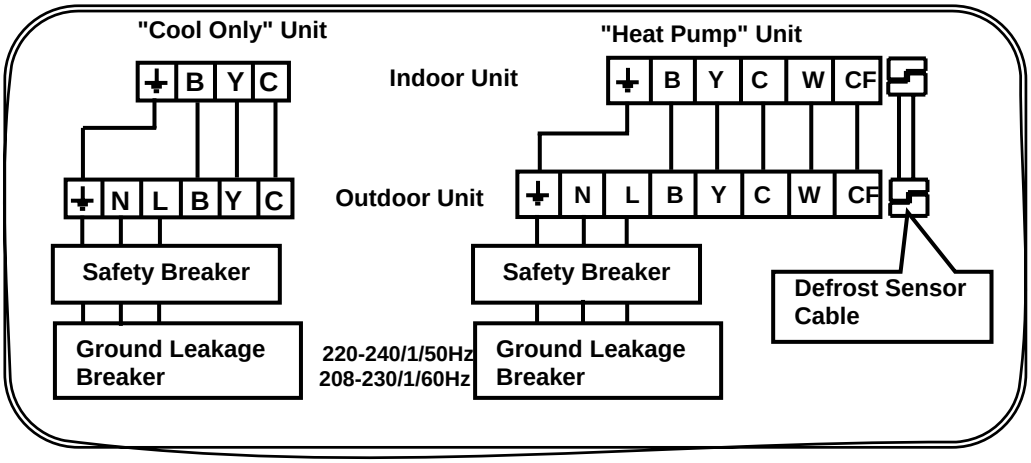
(007: 017) models



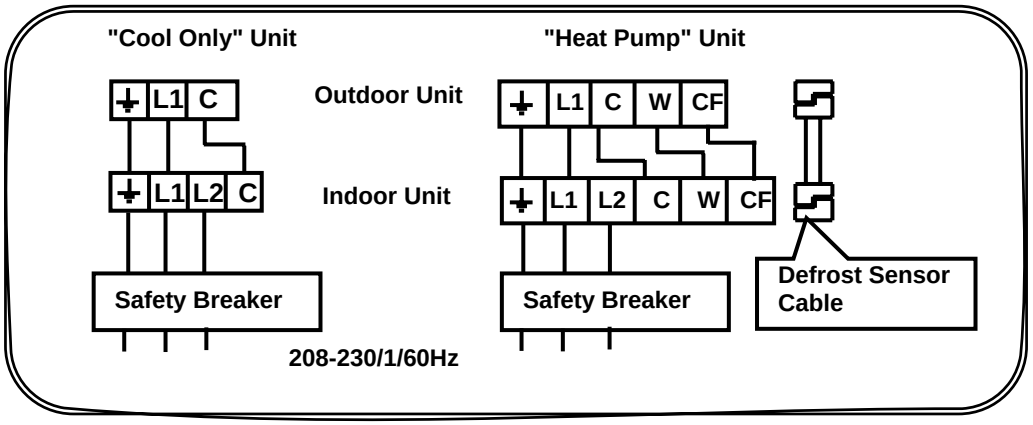
(015 : 024) models



(020: 036) models



(018 : 024) models



(030 : 036) models

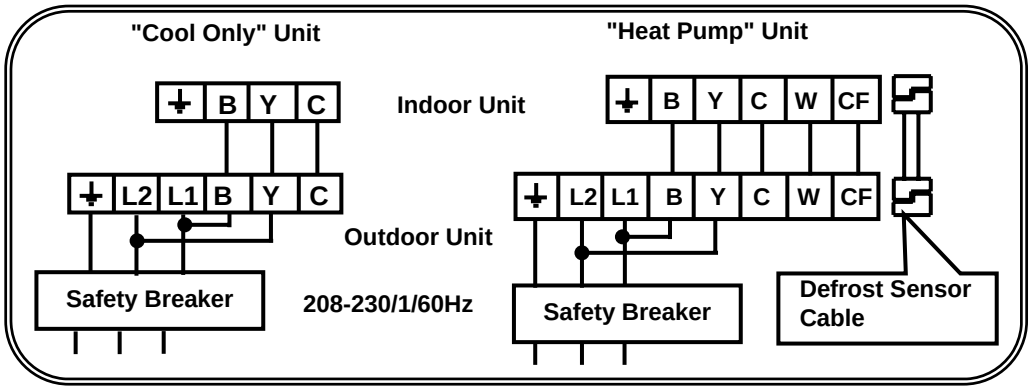
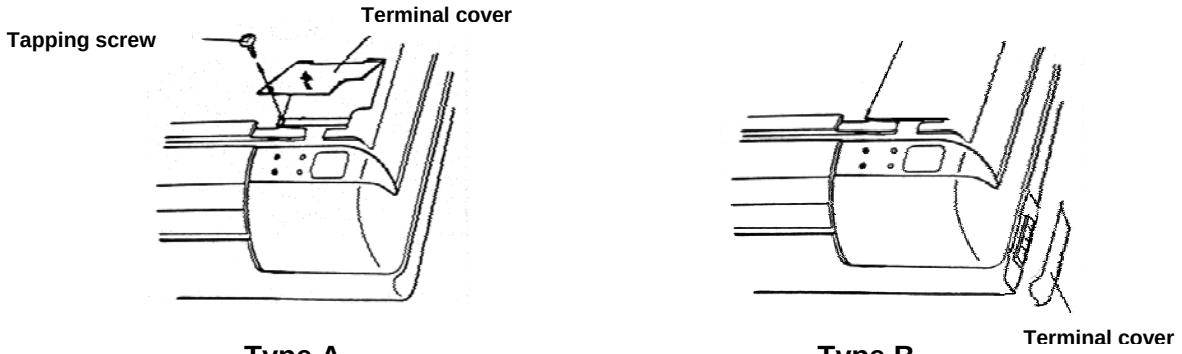


Fig. 10

* In some cases, the indoor terminal block contains: B(indicated to live) and Y(indicated to neutral) instead of (L) and (N).



Type A **Type B**

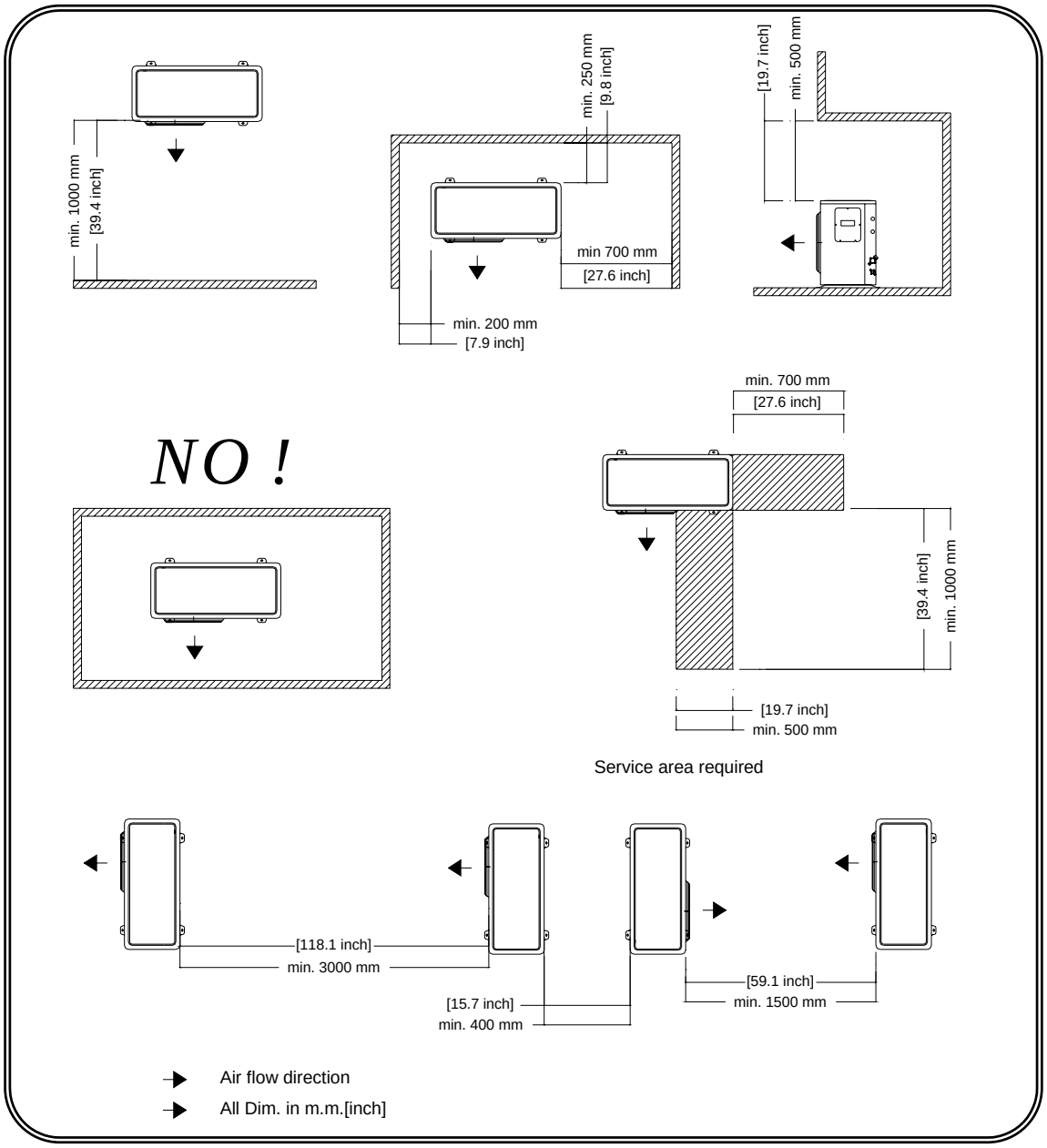
Fig.11

Wiring Connection:

1. Remove the intake grill.
2. Remove the terminal cover as (type A) or (type B).
3. Remove the clamp.
4. Match the terminal block numbers and connection colors with those of the outdoor unit.
5. Connect the connection cords firmly to the terminal block. Imperfect installation may cause afire "see fig.16".
6. Always connect the ground wire.
7. Fasten the connection cord with the cord clamp.
8. Fasten the terminal cover.

Outdoor Unit Installation:

- If possible, don't install the unit where it will be exposed to direct sunlight.
- Don't install the unit where a strong wind blows or where it is very dusty.
- Take you neighbors into consideration so they are not disturbed by air blowing into there windows or by noise.
- Flow the dimensions as shown below.
- Don't set the unit directly on the ground because it will cause trouble.



Refrigerant Pipe Work:

CAUTION

The maximum lengths of piping is shown in the Table 6 if the unit are further apart than this, correct operation cannot be guaranteed.

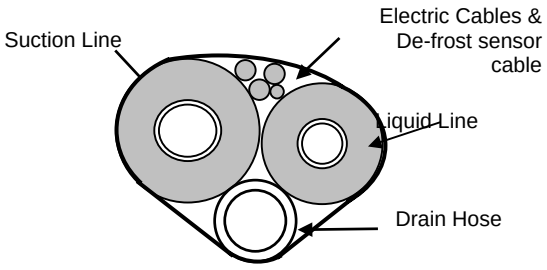
TABLE (6)

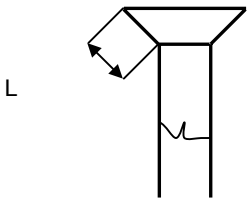
Equivalent Length	m	1 - 6		6 - 12		12 - 16		16 – 24		24 - 30	
	ft	3 - 20		20 - 40		40 - 54		54 - 80		80 - 100	
Model Name		S	L	S	L	S	L	S	L	S	L
Classic Indoor 07 – 09 Golden Plasma series "B" Indoor 007 - 009 "R22"		9.5 (3/8")	6.4 (1/4")	12.7 (1/2")	6.4 (1/4")						
Classic Indoor 12 – 17 "R22" Golden Plasma series"B" Indoor 007 : 012 "R407"		12.7 (1/2")	6.4 (1/4")	15.9 (5/8")	9.5 (3/8")						
Classic Indoor15		15.9 (5/8")	9.5 (3/8")	15.9 (5/8")	9.5 (3/8")	19 (3/4")	9.5 (3/8")	19 (3/4")	9.5 (3/8")		
Golden Plasma Indoor 018 : 024											
Classic Indoor 20*											
Classic Indoor 24*											
Classic Indoor 30 : 36		19 (3/4")	9.5 (3/8")	19 (3/4")	9.5 (3/8")	22.2 (7/8")	12.7 (1/2")	22.2 (7/8")	12.7 (1/2")	22.2 (7/8")	12.7 (1/2")

Where S: is the suction line diameter .in mm (in") & L: is the liquid line diameter in mm (in")
Insulating the pipes:

- Both liquid and the suction pipes must be insulated separately by a heat resistance material such as Polyethylene foam with a heat transfer rate of 0.035–0.045 kcal/m h c°(0.14-0.18BTU/h) and with a thickness of 8-10mm(0.31-0.4in).

Preparing pipes:

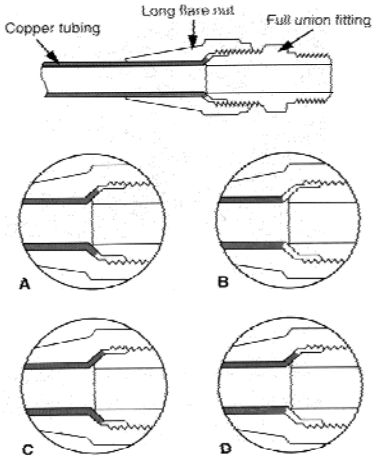




Check if (L) is flared uniformly and not cracked or scratched

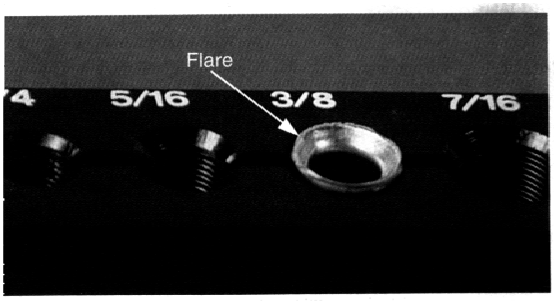
Fig.12

- Cut the connection pipe to the necessary length with pipe cutter.
- Hold the pipe downward so that cuttings will not inter the pipe and remove the burrs.
- Insert the flare nut onto the pipe and flare the pipe with flaring tool.
- When bending the pipe, be careful not be crush it.
- To prevent crushing of the pipe, don't bend the pipe at radius curvature of 100 mm (3.9in) or more.
- If the copper pipe is bent or pulled to often, it will become stiff.
- Don't bend the pipe more than three times at one place.
- Connect the outdoor and indoor piping.
- After matching the center of the flare surface tight the flare nut by hand, then tight the nut to specified tightening.



Correctly made flare is vital to achieving a leak proof connection. A- Correctly made flare,B-Flare too small, C- Flare too large,D-Flare uneven.

Fig.13



The flaring tools cone-shaped adapter stretches the end of the tubing and forces it against the chamfer forming a 45˚ flare.

Fig.14

Fig.15

Air Vacuum:

1. Remove the cap; connect the gauge manifold and vacuum pump to the charging valve by service hoses "see fig.18".
2. Vacuum the indoor unit and the connecting pipes until the pressure in them lowers to below1.5 mmHg (-30 inHg), keeping vacuum process for 10 minutes at least.
3. Disconnect the service hoses and fit the cap to charging valve.
4. Remove the blank caps, and fully open the spindles of the 2way or 3way valve with Hexagonal wrench (torque 70 - 90 kgf.cm = 516.29 - 663.8 Ib-ft) for 2way valve & 100 - 120 kgf.cm = 737.56 - 885.7 Ib-ft) for 3way valve.
5. Tighten the blank cap to specified torque (200 – 250 kgf.cm = 1475.12 - 1843.9 Ib-ft) See Fig. 17.

Additional Charge:

The unit design considered the pipes equivalent length between indoor and outdoor is 4 meter. For more pipes length add the additional charge as mentioned at table(7) .

TABLE (7)

	Classic Indoor 07-09 Golden Plasma series “B” Indoor 007 : 010	Classic Indoor 12-17 Golden Plasma series “B” Indoor 012 - 015	Classic Indoor 15 : 24 Golden Plasma series “B” Indoor 018 : 024	Classic Indoor 30 : 36
Charge R22/R407C Gm/m	20	25	30	45

Note: In case R407C

1. Never add additional charge to increase the R407C of leakage system, the leakage system must be repair first and recharge.
2. During initial charging, R407C must be removed from the charging cylinder in the liquid phase.

R407C is a new refrigerant which prevent Ozone layer destruction.

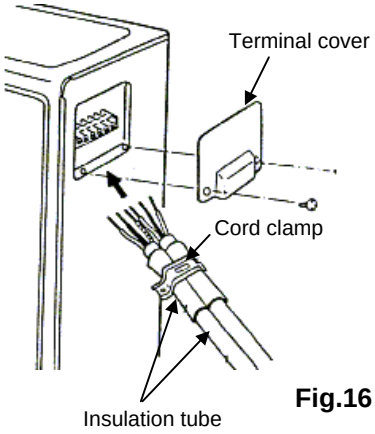


Fig.16

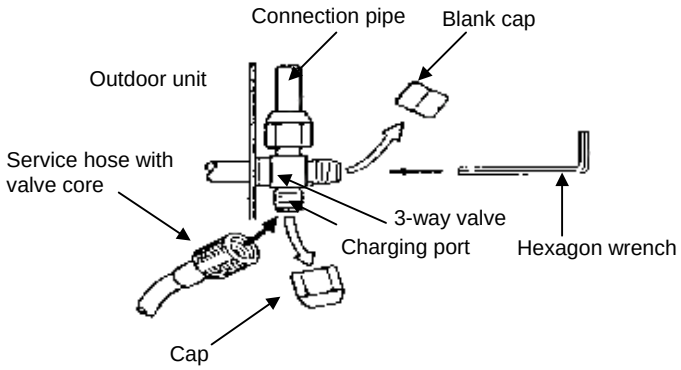


Fig.17

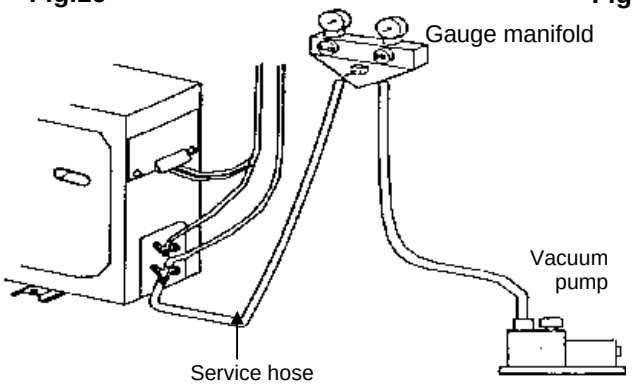
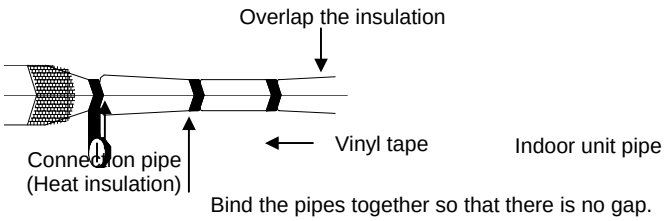
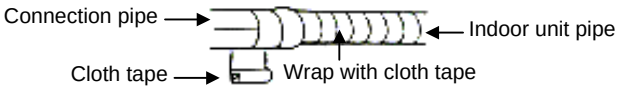


Fig.18

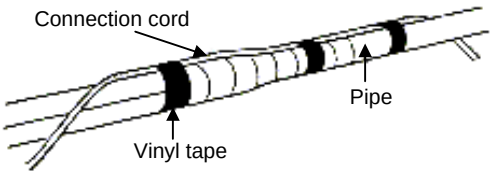
(1)Insulate between pipes.

For rear,right,and bottom piping overlap the connection pipe heat insulation and indoor unit pipe heat insulation and bind them with vinyl tape so that there is no gap.
For left and left rear piping, put the connection pipe heat insulation and indoor unit pipe heat insulation together and bind them with and vinyl tape so that there is no gap.





- For left and left rear piping, bind the connection cord to the top of the pipe



- For left and rear piping, bundles the piping and drain hose together by wrapping them with cloth tape over the range.

Fig.19

Check That:

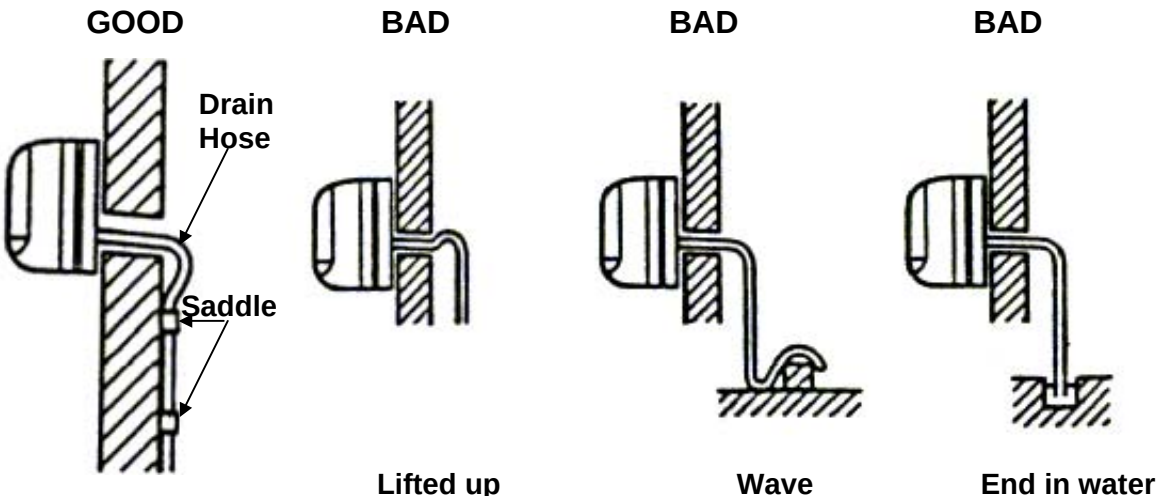


Fig.20

Developed Air Filters "For Golden Plasma series “B” only

Our units built a great reputation on developing air purifiers system with a carbon and plasma filters technique which is more efficient than conventional purifiers cleaning system.
Passive air filtration with active air treatment to achieve healthier environment.

Plasma filters:

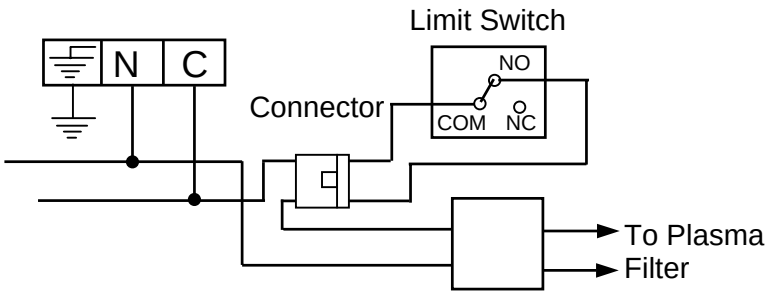
- Plasma technology depends on emitting the negative ions - released by high voltage techniques - like those responsible for purifying the air in the nature by inactivated the effects of chemical components of the odors, mold spores….etc.
- It is effective against:

1-Viruses
2-Floating Mold Spores (as nitrogen oxide from cigarette smoke)
3-Odors (as cigarette smoke, garbage and toilet).

Installation Procedure:

1- Turn the power-supply off.
2- Open the unit front grill
3- Remove the air filters.
4- Remove the unit front cover.
5- Install the plasma filter electric black block into the Electric box.
6- Fasten the bag filter in front of the coil by screws.
7- Connect the Plasma filter wire as wiring bellow.
8- Return the front cover and air filters.

Electric Wiring Connection:



Plasma Filter Cleaning Procedures:

1- Turn the power-supply off.
2- Open the unit front grill
3- Remove the front cover and air filters.
4- Remove the plasma filters.
5- Drip the filters on water mixed with neutral detergent vessel for 20 minutes .
6- Dry up the filters in the shade for a day (be sure that the humidity is removed perfectly).
7- Return the front cover and air filters.

Carbon Filter:

Carbon filter is an active filter in dealing with odors. It is remove the Pet hair odor , Toilet odor, garbage odor,…etc.

Installation Procedure:

1- Turn the power-supply off.
2- Open the unit front grill.
3- Remove the Air filters.
4- Slide them in the front cover filter guide.
5- Return the air filters.

Carbon Filter Cleaning Procedures:

1- Turn the power-supply off.
2- Open the unit front grill.
3- Remove the Air filters.
4- Remove the carbon filters.
5- Keep them in the sun shine for two hours.
6- Return the air filters.

Test running:

Connect the power supply to the unit; a circuit breaker is required in the power supply line.
Prepare the remote controller for option by installing the accessory battery in their place (see instruction in User Manual).
Test the operating voltage at the power terminal block on the unit, and check that it accords with the correct volt.
Operate the unit (see instruction in the User Manual) and check that every thing is satisfactory.
If the room temperature is low or the unit dose not operates, use the test switch to test running (Remember to put the switch back after testing).

AFTER INSTALLING CHECKS:

- Are the indoor and the outdoor units installed securely?
- Are the air inlets and outlets in both units unobstructed?
- Is the line voltage around the correct figure?
- Is the ground wire connected to the grounded?
- Does the remote controller operate correctly?
- Is the De-frost sensor located and connected correctly?
- Is there any gas leakage?
- Is the piping insulation complete?
- Does the drain water flow smoothly?